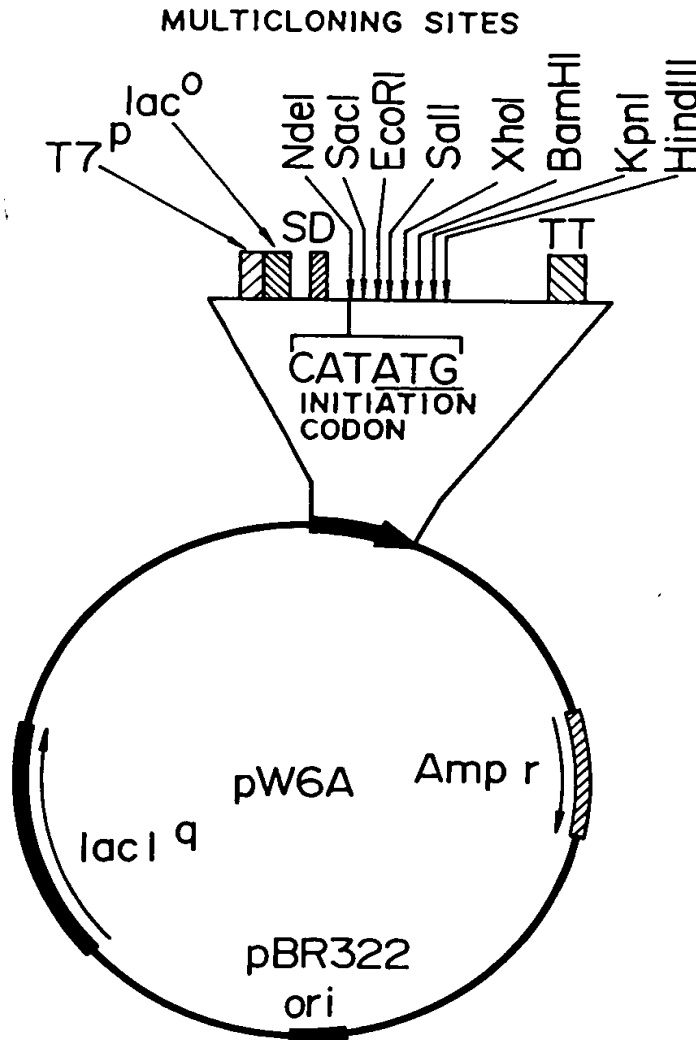


FIG. 1

DETAILED DIAGRAM OF EXPRESSION VECTOR pW6A



T7^P : T7 PROMOTER
 lac^O : lac OPERATER
 SD : SHINE-DALGARNO SEQUENCE
 TT : T7 TRANSCRIPTIONAL TERMINATOR

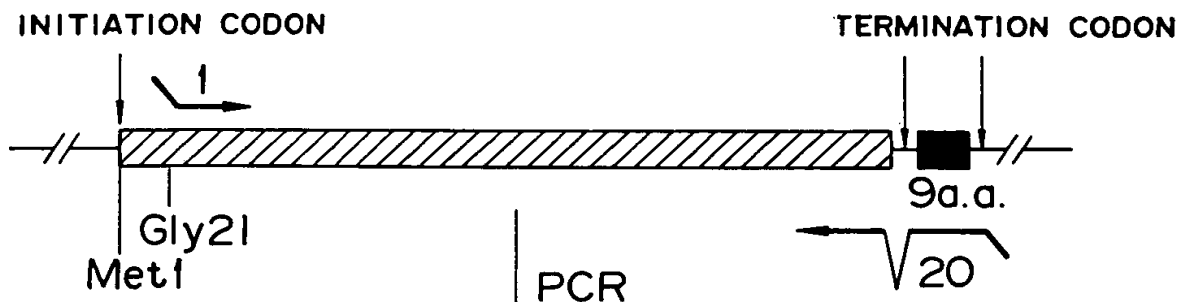
Amp^r : β LACTAMASE
 lacI^q : lac REPRESSOR
 pBR322 ori : REPLICATION ORIGIN

2/11

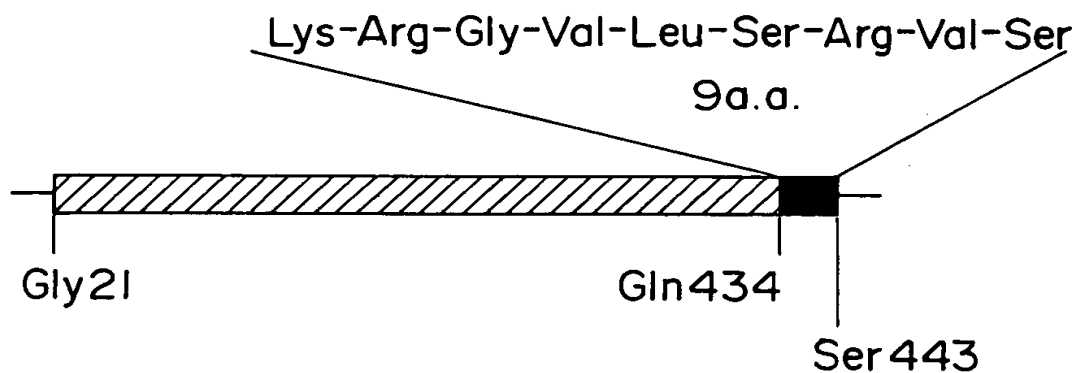
FIG. 2

PREPARATION OF GENE ENCODING 47K ANTIGEN

GENE ENCODING 47K ANTIGEN ON GENOMIC DNA



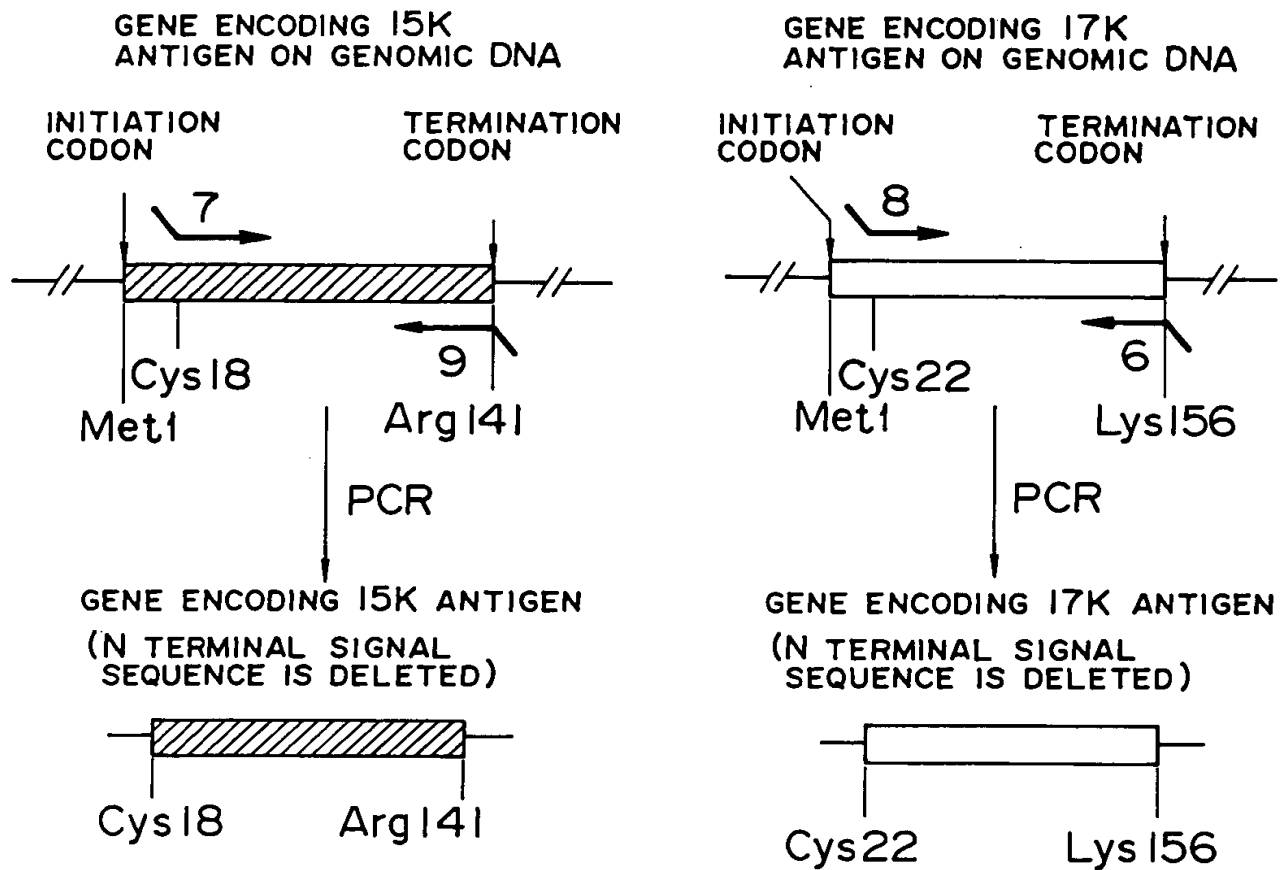
GENE ENCODING 47K ANTIGEN WITH C TERMINAL EXTRA SEQUENCE
(N TERMINAL SIGNAL SEQUENCE IS DELETED)



3/11

FIG. 3

PREPARATION OF GENE ENCODING 15K ANTIGEN AND 17K ANTIGEN

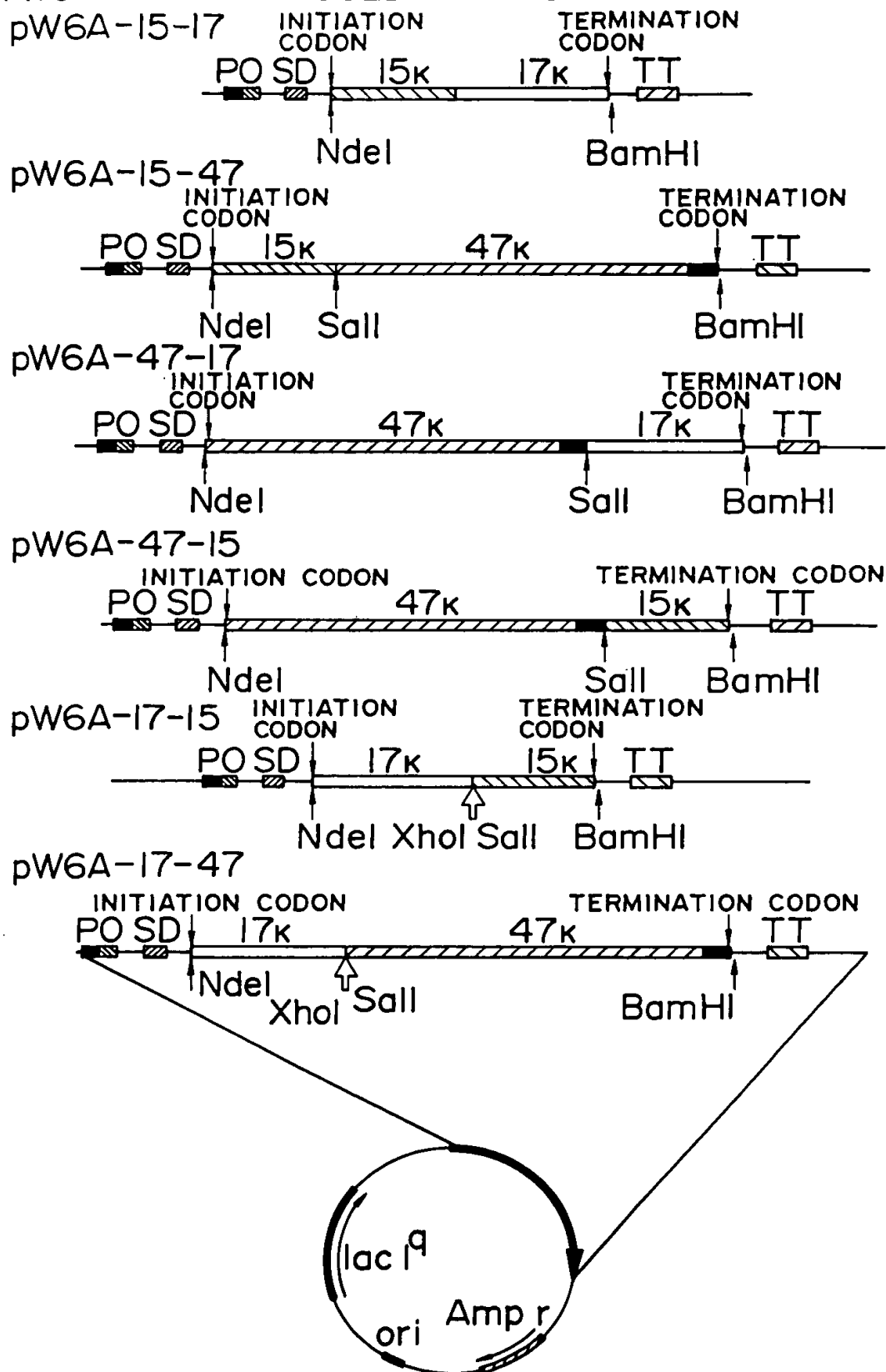


← : PRIMER

4/11

FIG. 4

DETAILED DIAGRAM OF EXPRESSION VECTOR FOR TWO-ANTIGEN FUSED ANTIGEN

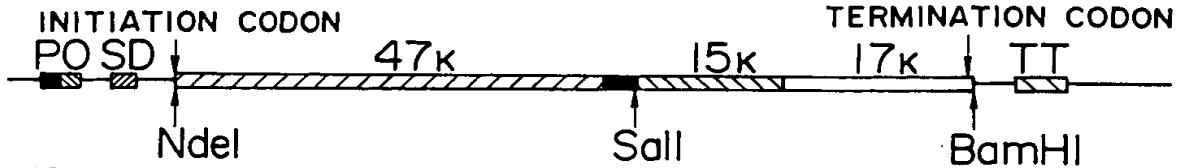


5/11

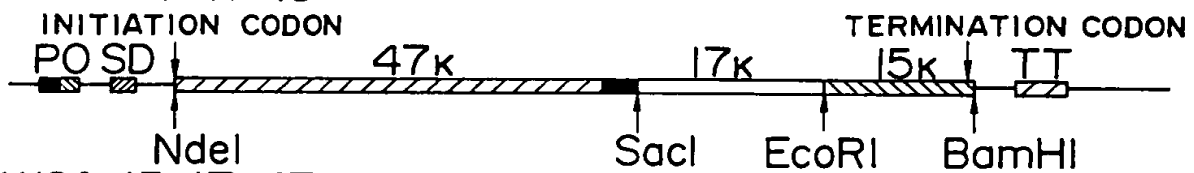
FIG. 5

DETAILED DIAGRAM OF EXPRESSION VECTOR FOR
 THREE-ANTIGEN FUSED ANTIGEN

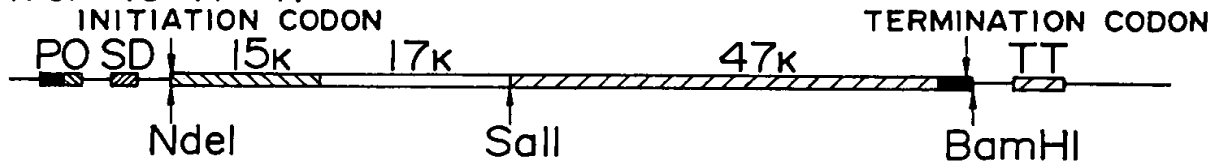
pW6A-47-15-17



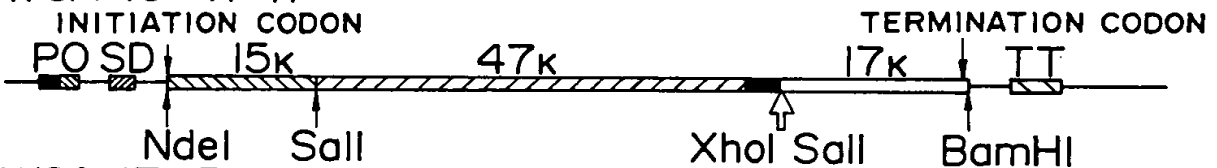
pW6A-47-17-15



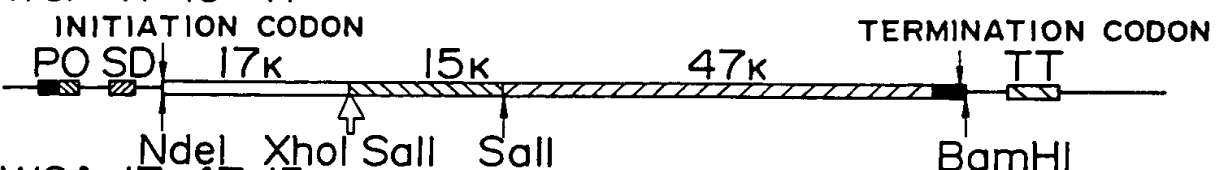
pW6A-15-17-47



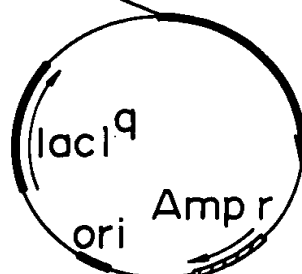
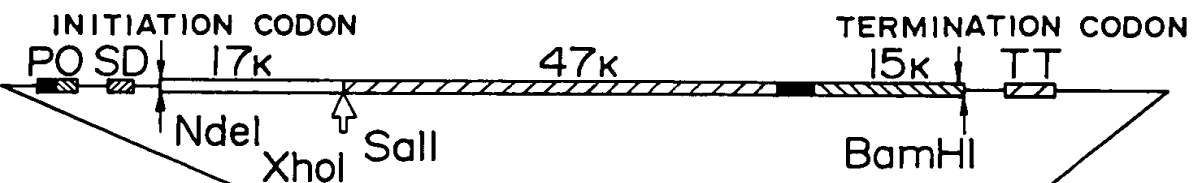
pW6A-15-47-17



pW6A-17-15-47



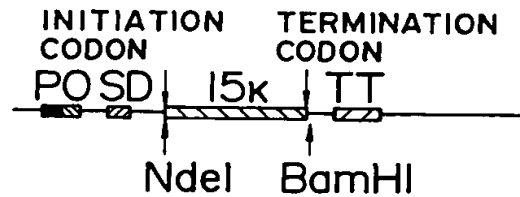
pW6A-17-47-15



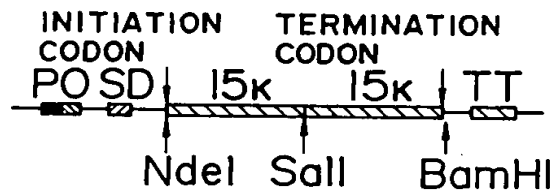
6/11

FIG. 6

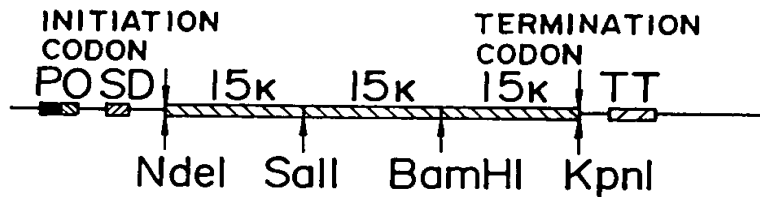
pW6A-15



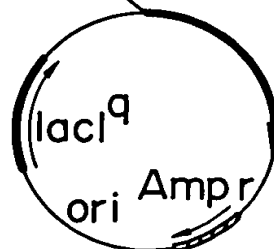
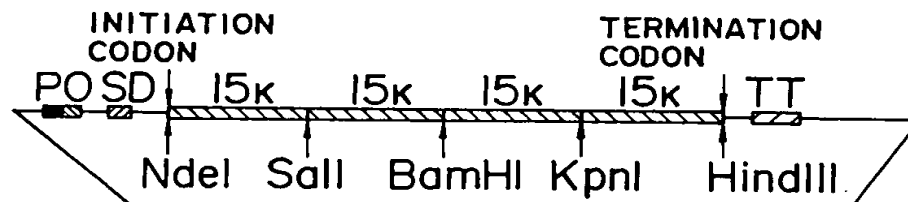
pW6A-15-15



pW6A-15-15-15



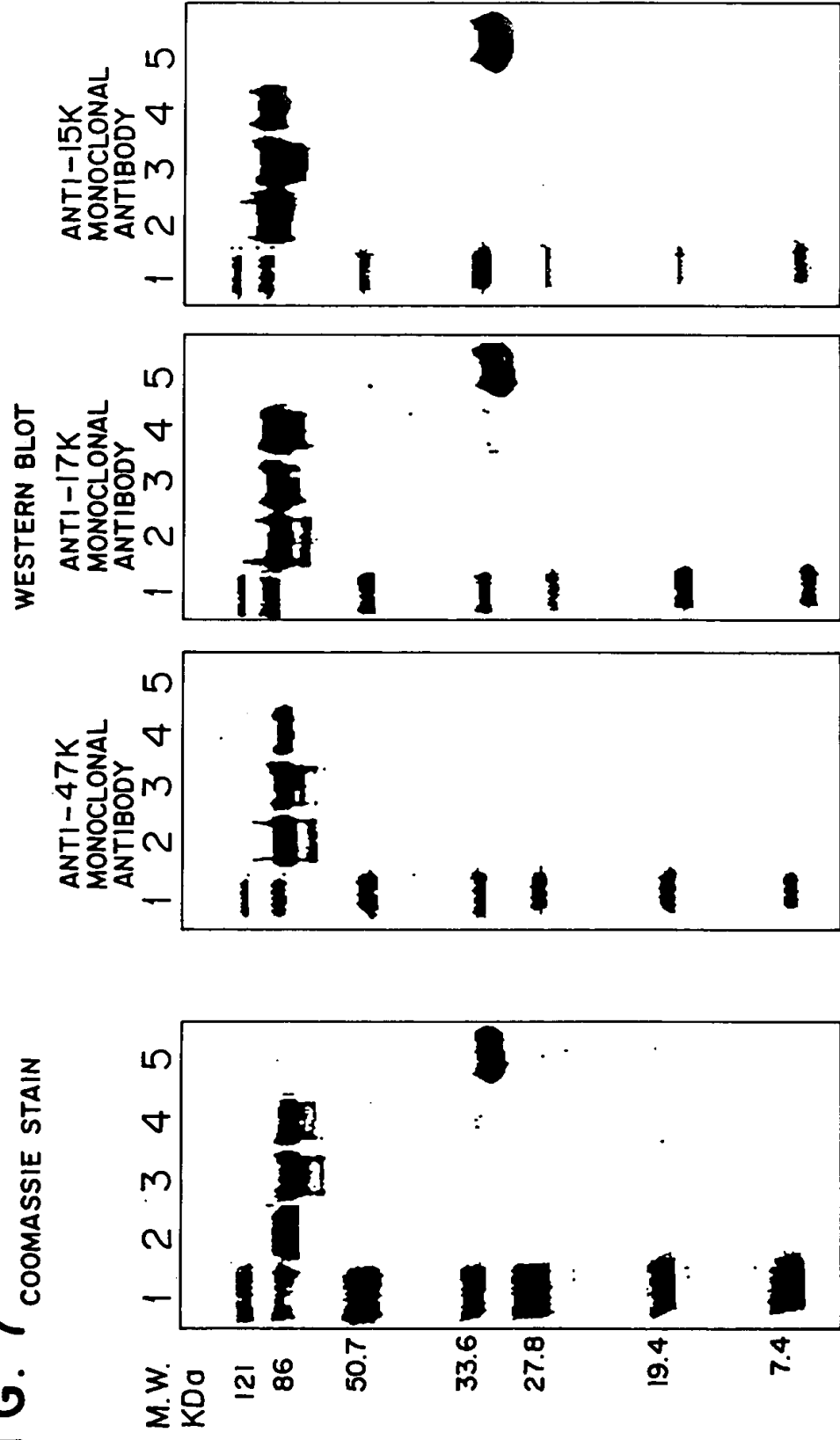
pW6A-15-15-15-15





7/11

FIG. 7 COOMASSIE STAIN



LANE 1: MOLECULAR WEIGHT MARKER

- 2: 47-17-15
- 3: 47-15-17
- 4: 15-17-47
- 5: 15-17

8/11

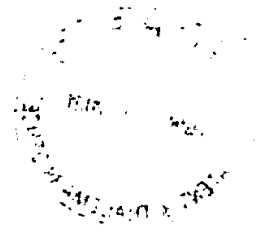
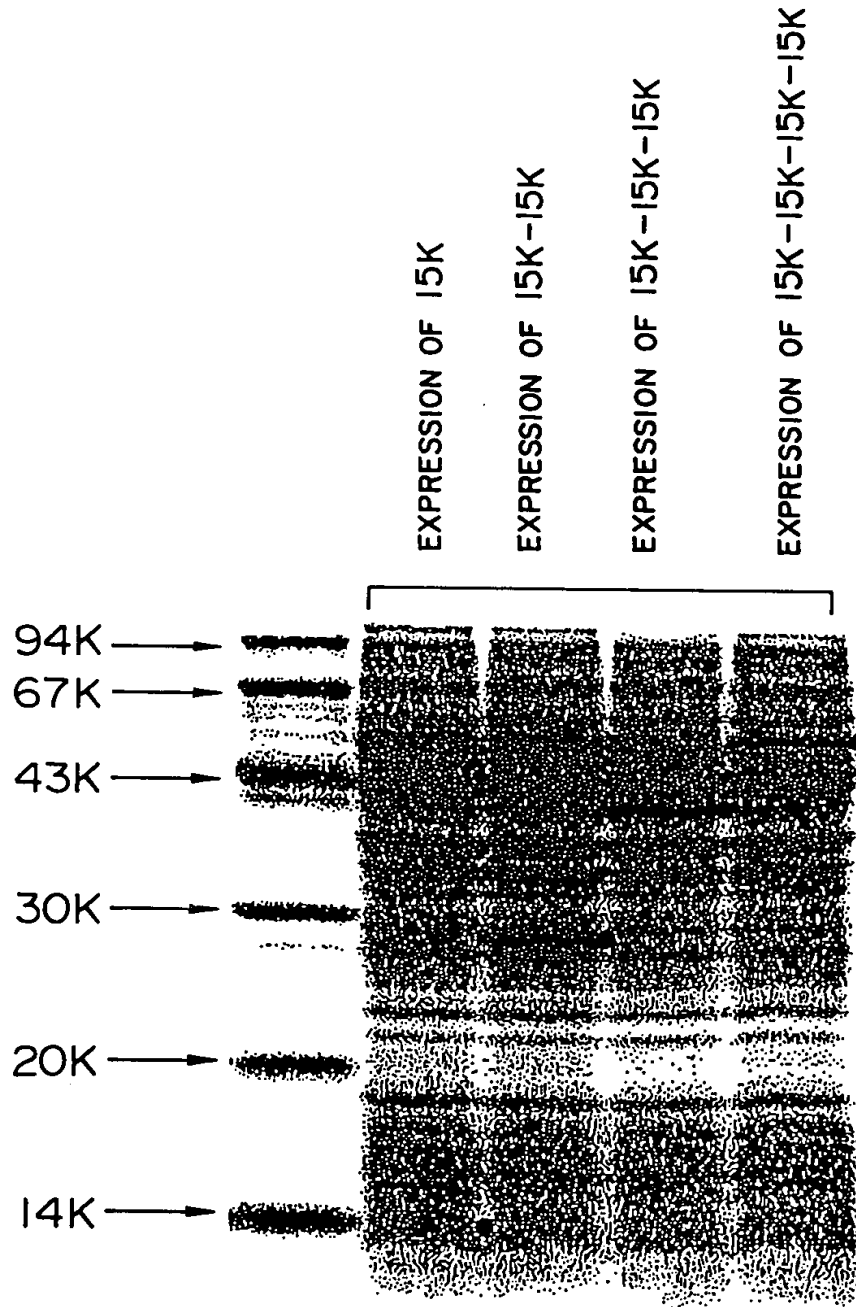
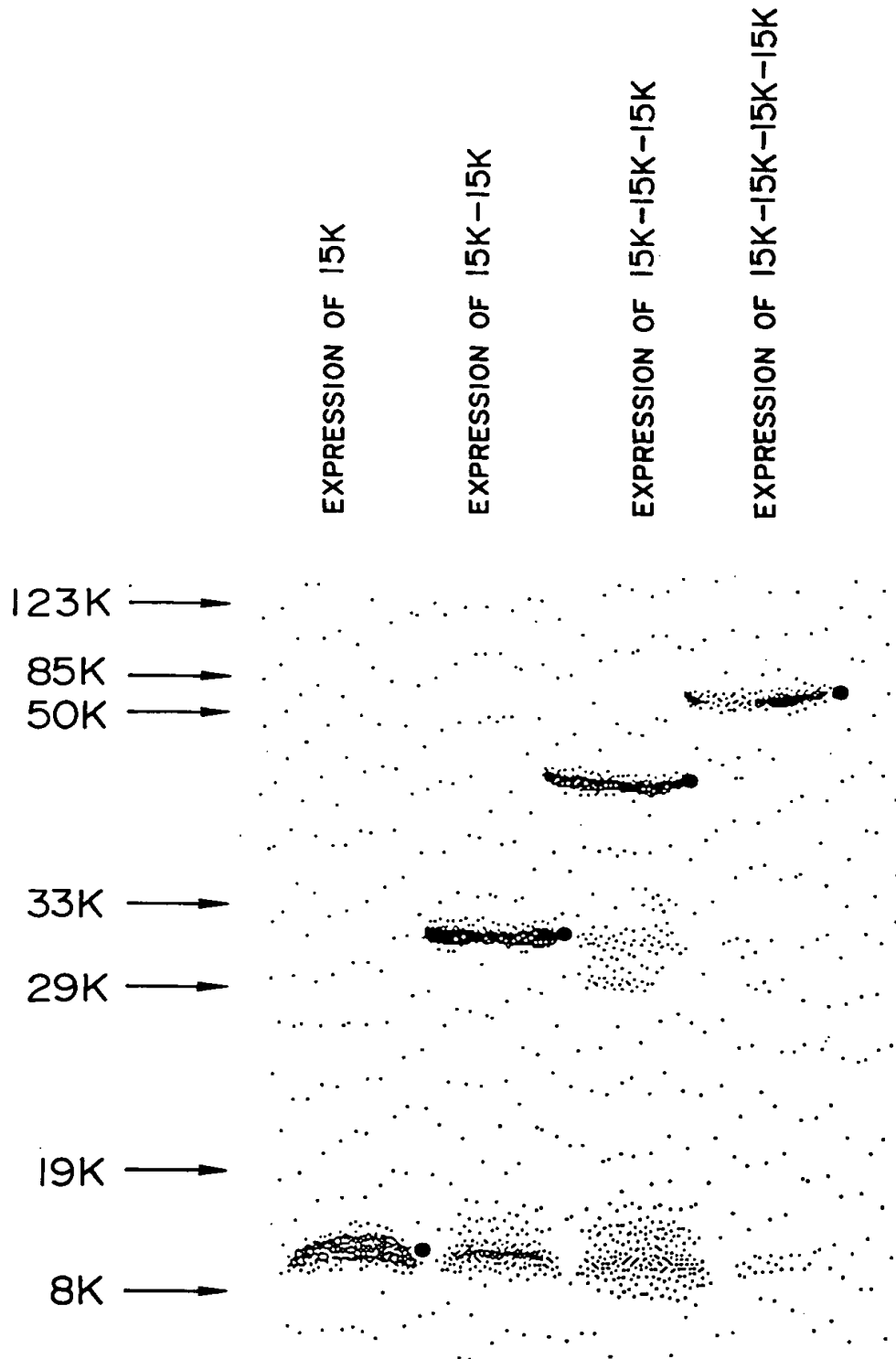


FIG. 8



9/11

FIG. 9



10/11

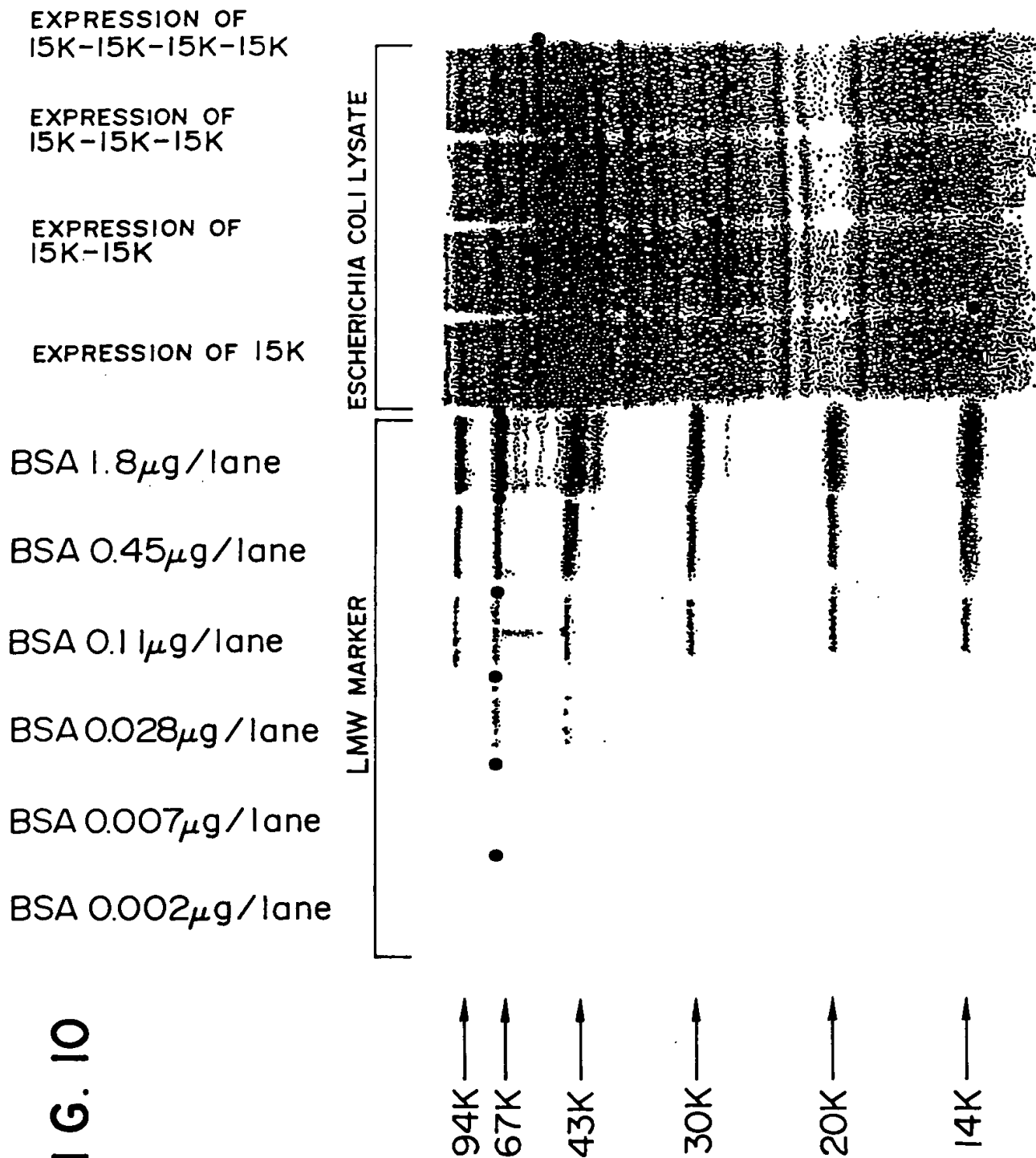


FIG. 10

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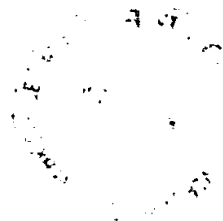


FIG. 11

